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Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

What is claimed is:

1. (Original) Optical tweezers using laser light comprising:
at least one Vertical Cavity Surface Emitting Laser, or VCSEL, supplying the laser light.
2. (Original) The optical tweezers according to claim 1 wherein the at least one VCSEL comprises:
an array of VCSELs.
3. (Original) The optical tweezers according to claim 2 wherein a plurality of the VCSELs of the array simultaneously illuminate a plurality of objects at a plurality of different locations all at the same time.
4. (Original) The optical tweezers according to claim 2 wherein a plurality of the VCSELs of the array simultaneously illuminating a single object so as to increase an optical force imparted to the object over that optical force which would be imparted by a illumination with laser light from a single VCSEL.
5. (Original) The optical tweezers according to claim 1 or claim 2 or claim 3 further comprising:
a stage (i) supporting the at least one object that is being illuminated by the laser light of the at least one VCSEL,

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and (ii) moving relative to the laser light of this at least one VCSEL;

therein serving to spatially move the at least object that is illuminated by the laser light of the at least one VCSEL.

6. (Original) The optical tweezers according to claim 1 or claim 2 or claim 3 further comprising:

a source of an electric field for spatially positioning by electrical force a same object that is illuminated by laser light from the at least one VCSEL so as to exert optical force upon this object.

7. (Original) The optical tweezers according to claim 1 or claim 2 or claim 3

wherein the at least one VCSEL emits laser light having a Laguerre-Gaussian energy distribution.

8. (Currently Amended) The optical tweezers according to claim 1 or claim 2 or claim 3 capable of manipulating an object [[>]] greater than 5 μ m in size.

9. (Currently Amended) A method of optically trapping and tweezing comprising:

optically spatially manipulating at least one object illuminated by [[the]] laser light of a vertical cavity surface emitting laser, or VCSEL.

10. (Currently Amended) The method of optically trapping and tweezing according to claim 9

wherein the optically spatially manipulating is applied to [[of]] a plurality of objects illuminated by the laser light

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beams of a plurality of vertical cavity surface emitting lasers, or VCSELs.

11. (Original) The method of optically trapping and tweezing according to claim 10

wherein the optically spatially manipulating is of all the trapped plurality objects simultaneously.

12. (Original) The method of optically trapping and tweezing according to claim 10

wherein the optically spatially manipulating of the trapped plurality objects is selective, with some of the plurality of objects being manipulated while others of the plurality of objects are not manipulated at all.

13. (Original) The method of optically trapping and tweezing according to claim 9 or claim 10 further comprising:

spatially moving at least one VCSEL relative to an object that is being illuminated by the laser light of this at least one VCSEL, therein spatially moving the object.

14. (Original) The method of optically trapping and tweezing according to claim 9 or claim 10 further comprising:

spatially positioning under force of an electric field the at least one object that is also optically spatially manipulated.

15. (Original) The method of optically trapping and tweezing according to claim 9 or claim 10

wherein the optically spatially manipulating by the laser light of a VCSEL is with laser light that is Laguerre-Gaussian in its power distribution.

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16. (Currently Amended) The method of optically trapping and tweezing according to claim 9 or claim 10

wherein the optically spatially manipulating is of at least one object ~~[[>]]~~ greater than 5 μ m in size.

17. (Currently Amended) Optical tweezers comprising:

a stage supporting a plurality of optically manipulatable objects; and

a plurality of Vertical Cavity Surface Emitting Lasers, or VCSELs, respectively originating a plurality of laser light beams for concurrently optically manipulating the plurality of objects supported upon the stage.

18. Canceled.

19. (Original) The optical tweezers according to claim 17 wherein the stage supporting the plurality of objects moves spatially relative to the plurality of laser light beams, therein simultaneously moving the plurality of objects.

20. (Currently Amended) The optical tweezers according to claim 17 further comprising:

a source of an electric field for electrically manipulating the plurality of objects supported upon the stage.

21. (Currently Amended) ~~Optical tweezers~~ An optical tweezer, comprising:

a stage holding an object; and

~~a source of~~ multiple Vertical Cavity Surface Emitting Lasers, or VCSELs, to respectively produce multiple laser beams impinging upon the object at the same time, therein enhancing

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the optical force imparted to the object over that which would be imparted by a single laser beam.

22. Canceled.

23. (Currently Amended) The optical tweezer [[tweezers]] according to claim 21 [[11]] wherein the multiple VCSELs are organized in a regular geometric array.

24. (Currently Amended) Optical tweezers comprising:
a stage holding multiple objects; and
a source of multiple intensity-controllable laser beams illuminating the multiple objects; and
a controller of the intensities of the laser beams;
wherein an optical force imparted to each of the multiple object illuminated by the multiple laser beams may be varied in accordance that the intensity of a corresponding one of the multiple laser beams is varied,

wherein the source of the multiple intensity-controllable laser beams comprises:

multiple VCSELs independently controllable in drive current; and

wherein the controller of the intensities of the laser beams comprises:

a controller of the drive currents of the multiple VCSELs so as to produce the multiple laser beams at multiple intensities.

25. Canceled.

26. (Currently Amended) The optical tweezers according to claim 26 [[25]] wherein the multiple drive-current-controllable

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VCSELs are organized in a regular geometric array.

27. (Currently Amended) Optical tweezers comprising:
two electrodes, at least one of which is optically
transparent, holding between them at least one object suitably
manipulatable both by (i) an electric field between the two
electrodes and, also, (ii) an impinging laser light beam; and
~~a source of a Vertical Cavity Surface Emitting Laser, or~~
VCSEL, to produce a laser beam passing through the at least one
electrode that is transparent to impinge upon the at least one
object so as to optically manipulate this at least one object;
wherein the at least one object is susceptible of
manipulation by both electrical and optical forces.

28. (Original) The optical tweezers according to claim 27
further comprising:

a liquid solution between the two electrodes in which
liquid solution the at least one object is maintained.

29. (Currently Amended) ~~Optical tweezers~~ An optical
tweezer, comprising:

a Vertical Cavity Surface Emitting Laser, or VCSEL, to
produce ~~a source of~~ laser light with a Laguerre-Gaussian energy
distribution.

30. Canceled.

31. Canceled.

32. Canceled.

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33. (New) The optical tweezer as in Claim 29, further comprising electrodes to apply an electric field to electrically manipulate an object that is optically manipulated by the laser light.

34. (New) The optical tweezer as in Claim 29, further comprising:

a lens to collect light from an object optically manipulated by the laser light; and

a camera to capture light from the lens to form an image of the object being optically manipulated by the laser light.

35. (New) The optical tweezer as in Claim 34, further comprising:

a stage to hold the object and at least another object; and means for moving the stage to move the other object into the laser light to be optically manipulated.

36. (New) The optical tweezers as in claim 17, wherein each VCSEL emits laser light having a Laguerre-Gaussian energy distribution.

37. (New) The optical tweezer as in Claim 21, wherein each VCSEL has a Laguerre-Gaussian energy distribution.

38. (New) The optical tweezers as in claim 24, wherein each VCSEL emits laser light having a Laguerre-Gaussian energy distribution.

39. (New) The optical tweezers as in claim 27, wherein the VCSEL emits laser light having a Laguerre-Gaussian energy distribution.